APPENDIX B

Environmental Mitigation Measures Applicable to Approved Transmission Line Route

Table 1 on the following page identifies the portion of the approved transmission line route that triggers each of the adopted mitigation measures. Following Table 1 is a listing of all mitigation measures from the Final EIR, as modified in the Addendum, that are applicable to the approved route. The attached list of all mitigation measures for the adopted transmission line route includes the following route segments:

- PG&E's Underground Route Option 1B from Jefferson Substation to Trousdale Transition Station
- Overhead from the Trousdale Transition Station to Glenview Transition Tower
- The proposed underground route from Glenview Transition Tower to Martin Substation, incorporating the East Market Street Alternative.

Class III Impacts

The following mitigation measures are recommended for impacts that were determined to be less than significant (Class III impacts): Mitigation Measures V-1a, V-15b, V-19a, and N-1a. These measures are recommended to further reduce less than significant impacts to the greatest extent feasible.

Land use Mitigation Measures L-4a and L-4b are required to reduce potentially significant (Class II) impacts associated with helicopter related construction activities and to reduce the impacts of general construction noise to less than significant levels. Mitigation Measures L-7a and L-7b are required to reduce potentially significant (Class II) transportation impacts related to restricted access to properties to less than significant levels. However, the same mitigation measures are recommended in the Land Use section to mitigate Class III impacts, so in that case the measures would reduce impacts to the greatest extent feasible.

Table 1. Mitigation Measures Applicable to Approved Transmission Line Route

Mitigation Measure Title	Applicable to Alternative 1B	Applicable to Proposed Underground	Applicable to Overhead Segment	Applicable to Transition Stations and/or Substations
Land Use				
L-4a: Provide Construction Notification and Minimize Construction Disturbance.	X	X	X	X
L-4b: Provide Public Liaison Person and Toll-Free Information Hotline.	X	X	X	X
L-4c: Provide Compensation to Displaced Residents			X	
L-5a: Coordinate with SFPUC within Peninsula Watershed			X	
L-7a: Provide Continuous Access to Properties.	X	X	X	
L-7b: Coordinate with Businesses.	X	X	X	
Visual Resources				
V-1a: Reduce visibility of construction activities and equipment.	X	X	X	X
V-6a: Paint Towers with Appropriate Colors				X
V-15b: Use Steel Poles from Tower 10/69 to 14/95			X	
V-16a: Relocate Tower 11/75 Away from Sawyer Camp Trail.			X	
V-17a: Relocate Tower 13/84.			X	
V-17b: Eliminate Proposed Towers 12/80 and 12/82.			X	
V-19a: Eliminate Towers 13/89, 14/91, 14/92, and 14/94.			X	
V-20a: Transition station landscaping (if overhead crossing of the Dam is required)	X			X
Biological Resources				
B-1a: Perform Wetlands Delineation and Avoidance (supplements APM Bio-7).			X	X
B-1b: Provide Restoration/ Compensation for Vegetation Losses.			X	X
B-1d: Perform Pre-construction Surveys and Provide Monitors.	X	X	X	X
B-1e: Complete Rare Plant Surveys.	X	X	X	X
B-1f: Protect Sensitive Habitats During Construction.	X	X	X	X
B-1g: Implement Weed Control.	X	X	X	X
B-1h: Negotiate Compensation for Loss of Significant Plant Communities.			X	X
B-1i: Implement Worker Education.	X	X	X	X
B-1k: Use Transition Tower Instead of Station.				X
B-2a: Compensate for Tree Loss.			X	X
B-3a: Restoration After Construction.			X	X
B-5a: Protect Wildlife During Construction.	X	X	X	X
B-7a: Prepare Bird Collision Study or Install Flight Diverters.			X	
B-8a: Protection for Special Status Wildlife Species.	X	X	X	X
B-8b: Consultation with Resource Agencies.			X	X

Mitigation Measure Title	Applicable to Alternative 1B	Applicable to Proposed Underground	Applicable to Overhead Segment	Applicable to Transition Stations and/or Substations
B-8c: Crystal Springs Dam CRLF Protection.	X			
B-9a: Habitat Loss from Underwater Cable Installation.	X			
Cultural Resources				
C-1a: Avoid Environmentally Sensitive Areas.	X	X		
C-1b: Cultural Resources Treatment Plan (CRTP).	X	X	X	X
C-1c: Construction Monitoring.	X	X	X	
C-3a: Evaluation of Historic Bridge.		X		
C-4a: Minimize Visible Change to Crystal Springs Dam.	X			
Geology and Soils				
G-1a: Perform Geotechnical Studies.	X	X	X	X
G-2a: Protect Against Slope Instability.			X	
G-3a: Consult a Paleontologist.			X	
G-5a: Reduce Effects of Groundshaking.	X	X	X	X
G-6a: Geotechnical Investigations for Liquefaction and Slope Instability.	X	X	X	X
G-7a: Geotechnical Surveys for Landslides.			X	
G-8a: Minimize Project Structures Within Active Fault Zone.	X	X	X	
G-9a: Implement Standard Engineering Methods for Problematic Soils.	X	X	X	X
G-11a: Implement Standard Engineering Methods for Corrosive Soils.	X	X	X	X
Hydrology & Water Quality				
H-1a: Erosion and Sedimentation Control.	X	X	X	X
H-2a: Hazardous Substance Control.	X	X	X	X
H-4a: Flood Damage Prevention.			X	X
H-7a: Operational Oil Releases.				X
H-8a: Scour and Erosion.	X	X		
H-9a: Construction Effects on Groundwater.	X	X		
H-10a: Contamination From Motorized Watercraft.	X			
H-10b: Protect Water Quality from Lakeshore Operations.	X			
Public Health & Safety				
HAZ-2a Conduct Phase II Investigation.	X	X	X	X
HAZ-3a Conduct Construction Soil and Groundwater Sampling and Testing.	X	X	X	X
HAZ-3b Observe Exposed Soil.	X	X	X	X
HAZ-4a Documentation of Compliance.				X
PS-1a: Limit the conductor surface electric gradient.			X	
PS-1b: Respond to and document all radio/television/equipment interference complaints			X	X
PS-2a: Determine proper grounding procedures			X	X

Mitigation Measure Title	Applicable to Alternative 1B	Applicable to Proposed Underground	Applicable to Overhead Segment	Applicable to Transition Stations and/or Substations
Recreation				
R-2a: Avoidance of Peak Use Periods and On-Site Notification.	X	X	X	
R-2b: Construction Plan for San Bruno Mountain State and County Park.		X		
Air Quality				
A-1a: Control Dust Emissions.	X	X	X	X
A-2a: Control Exhaust Emissions.	X	X	X	X
A-3a: Asbestos Dust Mitigation Plan.			X	
Noise				
N-1a: Minimize Construction Noise in Burlingame-	X			
Transportation & Traffic				
T-1a: Prepare Transportation Management Plans.	X	X	X	X
T-1b: Restrict Lane Closures.	X	X	X	X
T-3a: Repair Damaged Road ROWs.	X	X	X	X
T-6a: Ensure Emergency Response Access.	X	X	X	X
T-9a: Grade Separation Avoidance.		X		
T-9b: Crystal Springs Dam Bridge.	X			
Public Service & Utilities				
U-1a: Notification of Utility Service Interruption.	X	X		
U-1b: Protection of Underground Utilities.	X	X		
U-1c: Protect Utilities Against Corrosion.	X	X		

Land Use

L-4a **Provide Construction Notification and Minimize Construction Disturbance**. PG&E or its construction contractor shall provide advance notice, between two and four weeks prior to construction, by mail to all residents or property owners within 300 feet of the alignment. The announcement shall state specifically where and when construction will occur in the area. If construction delays of more than 7 days occur, an additional notice shall be made, either in person or by mail. Notices shall provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction. PG&E shall also publish a notice of impending construction in local newspapers, stating when and where construction will occur. Prior to construction, copies of all notices shall be submitted to the CPUC.

PG&E shall construct during the night in areas where a local jurisdiction requests such timing to reduce construction disruption, if it can be demonstrated that significant noise impacts would not occur. Whether requested by either PG&E or the local jurisdiction, PG&E shall provide written evidence of local jurisdiction approval to the CPUC prior to the start of any night work. PG&E shall also provide analysis of noise impacts and proposed mitigation measures for any residents or other sensitive land uses that would be affected by nighttime construction.

At least 90 days before the commencement of any construction activity within the City of Burlingame, PG&E shall hold a minimum of two public meetings, at locations to be designated by the City, in order to provide residents, businesses, and property owners with information on the construction schedule and the impacts of construction, e.g., lane/road closures, access blockage. At such meetings, PG&E shall have available claim forms and associated information packets and shall provide such to any attendee who so requests.

No less than a week prior to the scheduled public information meetings, an announcement of such meetings shall be published, by way of a notice of not less than one quarter of the page in size, in the following publications: San Mateo County Times, Burlingame Daily News, the Independent, and the San Mateo Daily Journal.

No less than ten days prior to the commencement of construction along each residential block of Trousdale Drive and Skyline Boulevard, PG&E shall place a "door hanger" notice at each residence which provides information on the date that construction will commence, the anticipated duration of that construction, and the name and phone number of the PG&E employee to contact if the resident has any questions.

L-4b **Provide Public Liaison Person and Toll-Free Information Hotline**. PG&E shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring residents about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public in accordance with Mitigation Measure L-4a. PG&E shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures shall be submitted to the CPUC for review and approval prior to construction.

L-4c **Provide Compensation to Displaced Residents**. If helicopter use requires the displacement of residents from homes along the transmission line route, residents shall be compensated by PG&E for this displacement. Compensation shall be negotiated with each household, depending on the extent and duration of disturbance, and shall include provision for meals and hotels, as well as accommodation of any special medical needs of displaced residents. PG&E shall provide to the

CPUC a statement documenting that an agreement has been reached with each affected landowner at least 30 days prior to the start of construction.

L-5a **Coordinate with SFPUC within Peninsula Watershed.** PG&E shall coordinate the locations of all support towers and cable-pulling sites within the Peninsula Watershed with the San Francisco Public Utilities Commission to ensure that construction and operation of the Proposed Project does not interfere with SFPUC maintenance and operations activities. This coordination shall be documented to the CPUC in a letter provided at least 60 days before the start of construction.

L-7a **Provide Continuous Access to Properties.** PG&E or its construction contractor shall develop construction plans defining in detail how driveway access restrictions will be minimized. This plan shall be submitted to the CPUC for review and approval at least 30 days before construction. PG&E shall provide notification to all residents or occupants regarding anticipated access blockage at least 48 hours before any blockage occurs. In the event that trench stability could be compromised by the laying of a temporary steel plate bridge during an early phase of trench construction, the construction contractor may defer a request for access to the soonest possible time until the stability of the trench has been assured, provided PG&E has provided 48-hour advance notification of the potential for disrupted access to any business or residence that may experience such delayed access. The notification shall include information on restoring access and the estimated amount of time that access may be blocked.

L-7b **Coordinate with Businesses.** Where private parking lots serving businesses would be effectively blocked during construction, PG&E shall either make prior arrangements with the business owner(s) to provide alternative parking within reasonable walking distance (i.e., no more than 1,000 feet), or shall coordinate the construction schedule so as to prevent disrupting the functions of the business(es).

Visual Resources

V-1a **Reduce visibility of construction activities and equipment.** If visible from nearby residences and roadways, substation and transition station construction sites as well as all staging and material and equipment storage areas shall be visually screened with temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. All evidence of construction activities, including ground disturbance due to staging and storage areas, shall be removed and all disturbed areas shall be remediated to an original or improved condition upon completion of construction including the replacement of any vegetation or paving removed during construction. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

V-6a **Paint Towers with Appropriate Colors.** Transmission towers that are visible from sensitive viewing locations (in this case Towers 3/19 through 4/24) shall be painted appropriate colors to most effectively blend the structures with the visible background landscape. Structures that are visible from more than one sensitive viewing location may require more than one color if backdrops are substantially different when viewed from different vantage points. For example, Tower 3/21 would typically have a light colored sky background when viewed from southbound I-280 north of the structure. Therefore, the north-facing structural surfaces should be painted a neutral, non-reflecting gray color. However, Tower 3/21 is backdropped by green, vegetated landforms when viewed from the southbound I-280 vista point (as illustrated in Figure D.3-6B) and much of northbound I-280 south of the structure. Therefore, south- and east-facing structural surfaces should be painted a neutral green color to more effectively blend with the background vegetation. PG&E shall submit a tower paint plan demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

V-15b **Use Steel Poles from Tower 10/69 to 14/93.** PG&E shall use tubular steel poles rather than the proposed lattice steel structures from Tower 10/69 to Tower 14/93. This measure would simplify structural appearance, enable the structures to better blend in with adjacent trees and landscape, and reduce structural contrast. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

V-16a **Relocate Tower 11/75 Away from Sawyer Camp Trail.** Relocate proposed Tower 11/75 to the east as shown in Figure D.3-15C. This reroute would eliminate the visual prominence of Tower 11/75 on views from the Sawyer Camp Trail at San Andreas Lake Dam. As part of this reroute, also eliminate Tower 12/76 by spanning from the revised Tower 11/75 location directly to Tower 12/77. If necessary, the height of Towers 11/75 and 12/77 can be increased (up to 30% additional height) to facilitate the longer conductor span.

If the reroute cannot be accomplished as described above without exceeding the 30% height increase limitation, the reroute can be modified as follows and as illustrated in Figure D.3-15c (Rev): (a) Tower 11/74 is to be moved to the east side of the current 60 kV Tower location rather than the west side as presently proposed (the purpose of this move is to reposition the tower to a slightly less prominent position when viewed from the San Andreas Lake Dam); (b) Tower 11/75 is to be relocated to a position south of the presently proposed location shown in Visual Resources Figure D.3-15C (the purpose of this move is to shorten the span distance between Towers 11/74 and 11/75 in order to enable a reduction in height of Tower 11/74); and (c) Retain Tower

11/76 in order to eliminate the height increase for Tower 12/77. During the preparation of final construction plans, PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

V-17a **Relocate Tower 13/84**. Relocate proposed Tower 13/84 to the south as shown in Figure D.3-16C. This reroute would eliminate the visual prominence of Tower 13/84 on northbound views of San Andreas Lake from the San Andreas Trail. If necessary, tower heights can be increased (up to 30% additional height) to facilitate longer conductor spans and the relocation of Tower 84. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

V-17b **Eliminate Proposed Towers 12/80 and 12/82.** Eliminate proposed Towers 12/80 and 12/82 and span directly from Towers 12/79 to 12/81 and 12/81 to 13/83, as shown in Figure D.3-16c. This measure would further reduce the visual impact of the Proposed Project on the San Andreas Trail. If necessary, tower heights can be increased (up to 30% additional height) to facilitate longer conductor spans.

If the elimination of Towers 12/80 and 12/82 cannot be accomplished as described above without exceeding the 30% height increase limitation, the measure can be modified as follows and as illustrated in Figure D.3-16c (Rev): (a) Retain Tower 12/80, thereby eliminating the need to increase the height of Tower 12/79 and reducing the height increase of Tower 12/81; and (b) If necessary, increase the height of Tower 13/83 to facilitate the reduction in heights of both Towers 12/81 and 13/84. PG&E shall consult with the visual specialist approved by the CPUC to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

V-19a **Eliminate Towers 13/89, 14/91, 14/92, and 14/94.** Eliminate Towers 13/89, 14/91, 14/92, and 14/94 by increasing span distances between proposed Towers 13/88 and 14/95. If necessary, modify the location and height of Towers 13/88, 14/90, 14/93, and 14/95 (as shown in Figure D.3-18D) to facilitate longer spans. Tower heights can be increased (up to 30% additional height) to facilitate longer spans.

If the elimination of Towers 13/89, 14/91, 14/92, and 14/94 cannot be accomplished as described above without exceeding the 30% height increase limitation, the measure shall be modified as follows and as illustrated in Figure D.3-18d (Rev): (a) Retain Tower 14/92, thereby substantially reducing the necessary height increases of Towers 14/90 and 14/93; and (b) Re-position Tower 14/92 to even the span distances between Towers 14/90 and 14/93 and to reduce the necessary height increases of Towers 14/90 and 14/93. PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

V-20a **Transition Station Landscaping**. At least 60 days prior to construction of the transition station, PG&E shall provide to the CPUC for review and approval a detailed plan for landscaping the transition station or structures. The plan shall be prepared by a landscape architect and shall be reviewed by a botanist providing input on appropriate planting in sensitive habitats and measures to minimize disturbance of sensitive habitats. Vegetation species are to be determined in consul-

tation with the botanist and the appropriate local planning agency. Screening vegetation of sufficient density and height shall be planted to fully screen from view within five years of completion of construction, the lower portions of the transition station including fences, walls, control building, and all electrical equipment including cable terminations, surge arrestors, and the lower 20 feet of the H-frame dead end structure or tower (for those locations that utilize a transition tower rather than a transition station). Plantings must be strategically placed in order to achieve effective screening of specific views for each transition facility location as follows:

- **San Bruno Avenue:** Views from San Bruno Avenue, Skyline Boulevard, Sky Crest Shopping Center, and Glenview Drive.
- **West of Skyline:** Views from Skyline Boulevard, and the San Andreas Trail.
- **Sneath Lane:** Views from Skyline Boulevard and Sneath Lane.
- PG&E Option 1B Alternative, Overhead Crossing of Crystal Springs Dam, Southern: Views from Skyline Boulevard and I-280,
- PG&E Option 1B Alternative, Overhead Crossing of Crystal Springs Dam, Northern: Views from Skyline Boulevard, Crystal Springs Road, and I-280.
- PG&E Option 1B Alternative, Modified Overhead Crossing of Crystal Springs Dam: Views from Crystal Springs Road.
- **Partial Underground Alternative, Ralston Substation:** Views from I-280 and Residences along Allegheny Way.
- **Partial Underground Alternative, Transition Station Near Tower 6/36:** Views from I-280, Skyline Boulevard, and Residences along Laurel Hill Drive.
- **Partial Underground Alternative, Transition Tower Near Tower 7/39:** Views from I-280, Skyline Boulevard, and Residences along Lakeview Drive.
- **Partial Underground Alternative, Transition Tower at Tower 8/50:** Views from I-280, Skyline Boulevard, and Residences along Darrell Road.
- **Glenview Drive Alternative Transition Tower:** Views from Glenview Drive and the residences immediately north of the site.
- **Trousdale Drive Alternative Transition Towers:** Views from adjacent watershed access roads.
- **Golf Course Drive Transition Station Alternative:** Priority shall be given to protection of views from I-280, the I-280 Hayne Road off-ramp, Skyline Boulevard, and Golf Course Drive. If this alternative is approved, at least 120 days prior to construction of the transition station, PG&E shall provide to the CPUC for review and approval a detailed Screening Plan for the Golf Course Drive Transition Station. The plan must include the retention of all existing trees that presently border the site, as well as additional strategic plantings to fill in gaps and view corridors between existing trees, as well as strategic plantings in new areas including; (a) along the west side of southbound I-280 in the immediate vicinity of the site, (b) along the west side of the I-280 southbound Hayne Road off-ramp, and (c) along the east side of Golf Course Drive extending from the entry gate far enough north to intercept all sightlines of southbound motorists on Golf Course Drive. The Screening Plan shall incorporate field guidance from the visual specialist to ensure that the Plan achieves the objectives contained in this measure.

The vegetation plan for each station or structure shall include simulations or drawings of the station or structures after 5 years and after 10 years. Development of the plan should include field consultations with the visual specialist to ensure that the objectives of this measure are achieved.

V-20b Transition Station Design Evaluation. This measure shall be implemented if the proposed transition station, the Sneath Lane Alternative Transition Station, or the West of Skyline Transition Station are approved. At least 120 days prior to construction of the transition station, PG&E shall provide to the CPUC for review and approval a detailed Transition Station Design Evaluation that provides the rationale for and against constructing a transition pole instead of a transition station and sufficient analysis, including visual simulations, to enable third-party evaluation of the two transition approaches. The relative value of biological habitat lost and visual impact created with each approach shall be considered in detail.

Biological Resources

B-1a **Perform Wetlands Delineation and Avoidance (supplements APM Bio-7).** A jurisdictional delineation of wetlands within the proposed transmission line corridor shall be performed by PG&E and verified by the U.S. Army Corps of Engineers. In addition, a formal mapping and assessment of riparian habitat shall be completed to satisfy CDFG 1601 (Streambed Alteration Agreement) requirements, where project activities (i.e., construction roads) substantially change the bed, channel, or bank of jurisdictional streams. Surveys, mapping and assessment shall be completed and reports submitted to the CPUC at least 60 days before start of construction. Results of these surveys (identification of wetlands and riparian habitat) shall be utilized to define areas that are to be avoided in final tower siting and location of access roads and other project components. A report summarizing wetland habitat findings with respect to tower locations, along with copies of all maps and assessments shall be submitted to the CPUC for review and approval.

Wetlands and aquatic resources such as intermittent and perennial creeks, drainages, and swales that occur within the ROW shall be identified as environmentally sensitive areas and shall be avoided during construction, unless otherwise allowed by permitting agencies. Any impacts to these resources will be minimized as described in APM Bio-7, and by obtaining USACE 404 and CDFG 1601 permits, and implementing the requirements of these permits and the SWPPP during construction. A Wetlands Restoration Plan shall be prepared detailing wetland and riparian restoration activities and this plan shall be submitted to the CPUC and resource agencies for review and approval before restoration activities are initiated. The restoration plan shall include planting information and definition of performance criteria and monitoring requirements.

B-1b **Provide Restoration/Compensation for Vegetation Losses.** Where impacts to wetlands, riparian, and serpentine grassland habitats cannot be avoided, PG&E shall either restore temporarily disturbed areas to pre-construction conditions following construction or provide compensation for vegetation losses as required by the appropriate resource agencies (USFWS and CDFG).

Where restoration is planned for mitigation of impacts to natural vegetation communities, the Applicant shall prepare and submit the draft Erosion Control and Revegetation Plan and Wetland Restoration Plan described in Mitigation Measure B-1a to the CPUC and the U.S. Army Corps of Engineers (for wetlands), the California Department of Fish and Game (CDFG) (for riparian habitat), and the Regional Water Quality Control Board (RWQCB) according to the requirements of any necessary permits, at least 60 days prior to the start of any construction or as otherwise required in those permits for their review and approval. The plan shall define the amount and type of habitat that will be permanently and temporarily impacted by any project-related activity, and shall include a discussion of the type and replacement ratios developed and accepted by the resource agencies (above). For natural community mitigation, the plan shall also include specifying the location of habitat type to be created, details on soil preparation, seed collection, planting, maintenance, and monitoring for on-site restoration efforts. Quantitative success criteria shall also be presented. The mitigation objective for affected significant natural plant communities shall be restoration to pre-construction conditions as measured by species cover, species composition, and species diversity. Success criteria shall be established by comparison with reference sites approved by the appropriate agencies. Contingencies in case of mitigation failure, such as off-site habitat creation or enhancement, shall be presented in the plan.

Creation or restoration of habitat shall be monitored for five years after mitigation site construction to assess progress and identify problems. Remedial actions (e.g., additional planting or erosion control) shall be taken during the five-year period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise noted by the jurisdictional agencies.

B-1d **Perform Pre-construction Surveys and Provide Monitors.** If the approved project route includes areas other than the Proposed Project route, pre-construction surveys shall be performed for certain special status plant and animal species within 200 feet of project construction activities (including towers, access roads, cable pulling sites, laydown sites, and other work areas). For any portion of the Proposed Project route that is approved, pre-construction surveys shall include only wildlife species, and previously identified special status plant populations shall be located and the ROW or work limits flagged prior to construction. Avoidance measures vary for each species and are specified under Mitigation Measure B-1e for rare plants, and under Mitigation Measures B-8a for special status wildlife species

Biological monitors approved by the CPUC, shall locate and stake identified sensitive resources in specified areas before construction activities begin and inspect areas prior to construction to ensure that barrier fencing, stakes, and required setback buffers are maintained. Special status species locations, as well as jurisdictional wetlands, riparian habitat, and serpentine grassland (as identified during 2002 and 2003 field surveys), shall be flagged prior to the start of construction of any project components; alternatively, the limits of the work area in the vicinity of these resources shall be flagged, to minimize the impacts of flagging activities within the protected resource. The CPUC shall be notified prior to the start of flagging activities so a CPUC-designated biologist may observe these activities. Maps and reports identifying locations of special status plants and animals found in pre-construction surveys, as well as proposed exclusion-fence locations, shall be provided to the CPUC for review and approval prior to the start of construction.

Construction activities within significant plant communities shall be minimized by placing towers so as to span these areas, maximizing the use of existing access roads, and minimizing the construction of new access roads. Prior to confirming final transmission corridor design, the locations of all project components (towers, roads, temporary work areas, etc.) shall be defined on a map that also illustrates locations of wetlands, riparian habitat, and special status plants and wildlife, and this shall be provided to the CPUC for review and approval.

B-1e **Complete Rare Plant Surveys.** Prior to construction, comprehensive rare plant surveys shall be conducted in previously unsurveyed areas for all plants that have been identified within the study area and those plants with the potential to occur in the study area (as defined in Tables 4-1). Surveys shall be conducted within appropriate areas along the selected construction ROW and in areas susceptible to surface disturbance by construction vehicles or personnel. Rare plant surveys of the ROW, cable pulling sites, laydown areas, and access roads shall be appropriately timed to cover the blooming periods of the nine special status plant species known to occur in the area (as identified in Table D.4-2). Maps depicting the results of these surveys shall be prepared and shall include other recently mapped special status plant occurrences in the area to ensure that the full scope of rare plant habitat in the project corridor vicinity is delineated.

Any special status plant occurrences located within 50 feet of the approved project facilities, and those located outside the 50-foot margin that might be affected by construction activities, shall be fenced or flagged prior to the start of any construction, and if feasible, towers or other project components shall not be placed in areas where these plant populations have been identified. Maps and reports, as well as proposed fence or flagging locations, shall be provided to the CPUC's approved biological monitor for review and approval prior to the start of construction. The locations of special status plant populations shall also be provided to construction personnel so they can be avoided.

B-1f **Protect Sensitive Habitats During Construction.** PG&E shall map and flag or fence sensitive resources that are at risk from project activities along overland travel routes and project access areas prior to construction, as approved by the land owner agency, and shall ensure that vehicles or project personnel do not disturb identified areas during construction activities. Areas flagged shall include serpentine grassland, wetland, riparian, and any other sensitive resource identified by the project biologist. The mapping/flagging shall be reviewed by a CPUC-approved biologist prior to use of these routes for construction to ensure adequate protection for sensitive plant communities. Project components shall be designed to avoid or minimize disturbance to these sensitive areas. The total area of disturbance to each plant community within the Proposed Project shall be quantified and provided to the CPUC and the resource agencies (USFWS and CDFG) to determine appropriate mitigation. If it is determined that special status plant communities cannot be avoided, Mitigation Measure B-8b shall be implemented.

B-1g **Implement Weed Control.** PG&E shall protect against the potential introduction or spread of noxious weeds or pathogens, such as sudden oak death. Sudden oak death management protocols are currently being developed for the San Francisco Watershed lands; PG&E shall coordinate with the SFPUC and resource and public agencies regarding sudden oak pathogen management. PG&E shall prevent invasion of invasive, non-native plant species into sensitive plant species habitats and vegetation types by:

- Implementation of measures during construction, such as cleaning vehicles prior to off-road use, using weed-free imported soil, restricted vegetation removal and requiring topsoil storage.
- Development and implementation of weed management procedures to monitor and control the spread of weed populations along the ROW.

PG&E shall prepare and implement a comprehensive Vegetation Management Plan for the transmission ROW (including staging areas and construction routes) for review and approval by the SFPUC and appropriate resource and local agencies. The Plan shall incorporate Best Management Practices (BMPs) developed by the SFPUC for employees, consultants, and contractors, and shall comply with the SFPUC Vegetation Management Plan for all areas of the ROW on the Peninsula Watershed for the life of the Proposed Project. BMPs for preventing the spread of invasive plant species include regular cleaning of boots, vehicle tires, and equipment prior to entering the Watershed.

In addition, the following measures shall be implemented to control the introduction of weed[1] species within areas disturbed during transmission line construction; implementation of these measures during construction shall be verified by the CPUC Environmental Monitor:

[1] A "weed" is defined here as any plant species (1) included on the California Exotic Pest Plant Council List A or the Red Alert list of species which are serious problems in wildlands (CalEPPC, 1999), or (2) identified as a noxious weed with potential to damage agriculture by the California Department of Agriculture.

- Vehicles and equipment used in off-road transmission line construction shall be cleaned after being used off-road on a different project and prior to initiating construction for the project in off-road areas with sensitive habitat as determined during the development of weed management and monitoring procedures and enforced by the biological monitor.
- Any imported topsoil shall be obtained from a source that can certify the topsoil as being "weed free."
- Vegetation clearing shall be minimized and shall occur only within the minimum footprint necessary for construction.
- During construction, the upper 6 inches of topsoil (or less depending on existing depth of topsoil) shall be salvaged and replaced wherever the transmission line is trenched through open land (not including graded roads, road shoulders, and other previously disturbed areas including the BART ROW). Areas having a significant weedy component may not be subject to topsoil salvaging requirements as determined by the CPUC-approved biological monitor.
- Disturbed soils shall be revegetated with an appropriate seed mix that does not contain weeds (as defined below); revegetation in sensitive vegetation types shall adhere to the relevant mitigation measures.

B-1h **Negotiate Compensation for Loss of Significant Plant Communities.** If the CPUC-approved Project Biologist, in consultation with project engineers, determines that avoidance or restoration of temporary impacts is not feasible or where permanent impacts (i.e., loss of habitat) to significant plant communities occur from access road or tower installation, compensation for the loss of these communities shall be provided by PG&E. Compensation shall be provided to levels acceptable by the CPUC, USFWS, CDFG, and USACE. In order to determine appropriate compensation, habitat loss shall be defined in a report submitted to the CPUC and resource agencies. The report shall identify appropriate compensation for loss of each type of resource (e.g., purchase of mitigation lands or donation to habitat preservation areas).

B-1i **Implement Worker Education.** A Worker Environmental Awareness Program (WEAP) shall be implemented for construction crews by a qualified biologist(s) provided by PG&E and approved by the CPUC prior to the commencement of construction activities. Training materials and briefings shall include but not be limited to, discussion of the Federal and State Endangered Species Acts, the consequences of noncompliance with these acts, identification and values of sensitive plant and wildlife species and significant natural plant community habitats, fire protection measures, hazardous substance spill prevention and containment measures, and review of mitigation requirements. Training materials and a course outline shall be provided to the CPUC for review and approval at least 30 days prior to the start of construction. PG&E shall provide to the CPUC a list of construction personnel who have completed training, and this list shall be updated by PG&E as required when new personnel start work. No construction worker may work in the field for more than 5 days without receiving the WEAP.

B-1k **Use Transition Tower Instead of Station**. If the West of Skyline Transition Station is approved, PG&E shall use a transition tower (rather than a station) to allow the overhead 230 kV transmission line to transition to underground. The specific location and design of the tower shall be submitted to the CPUC for review and approval at least 60 days prior to the start of construction. [This mitigation measure is also applicable to the Trousdale Drive and Glenview Drive Transition Towers.]

B-2a **Compensate for Tree Loss.** Standards for maintenance, management, and preservation of native and indigenous trees are established in the San Mateo County Heritage Tree Ordinance and the San Mateo County Significant Tree Ordinance. Tree removal permits or approvals for lost heritage or significant trees shall be obtained and mitigation shall be coordinated, as required, with the appropriate public and resource agencies. Mitigation for lost trees may not be implemented within the ROW due to fire safety concerns, and instead may be implemented in an alternative, agency-approved location.

PG&E shall avoid, minimize, and compensate for impacts to trees, including those protected by local ordinances, by:

- Pre-construction identification, fencing and avoidance of trees to the maximum extent during construction.
- Consultation with local jurisdiction if unavoidable impacts to trees protected under local and regional policies and ordinances ("Protected Trees") are likely to occur.
- Development and implementation of a Tree Replacement Plan for loss and/or significant damage to Protected Trees.
- Supervision and verification of the implementation of these measures by the Environmental Monitor.

The initial step for this measure shall be to determine the size and location of all trees located within and adjacent to the project work areas, staging areas, access roads and other active construction-related areas.. These trees shall be then assessed by a qualified biologist or arborist to identify and map Protected Trees. If it is determined that the project will trim, remove, or damage the roots of Protected Trees, avoidance measures shall be taken. Avoidance shall consist of installing protective fencing around the dripline of any Protected Tree. All construction activities, including excavation, grading, leveling, and disposal or deposition of harmful materials shall be prohibited inside the dripline fence. Attachment of wires, ropes, or signs to Protected Trees shall also be prohibited. The approved CPUC Environmental Monitor shall supervise compliance with these protective measures prior to and during construction activities.

If trimming, removal or root damage to a Protected Tree is unavoidable, the appropriate jurisdiction shall be consulted. Further actions may require a permit that would include fees and/or replacement for affected trees. Proposed trimming or other damage to Protected Trees along the proposed route shall be evaluated by a qualified arborist, who shall identify appropriate measures to minimize tree loss and shall supervise all associated activities in accordance with permit conditions issued by the responsible jurisdiction.

If the Proposed Project requires removal of trees (Protected Trees or others), a qualified forester, arborist, or restoration ecologist shall evaluate the tree replacement procedures to ensure that the replacement would be consistent with applicable local jurisdiction requirements, such as San Mateo County Tree Ordinances, and with additional permit conditions imposed by the local agency (e.g., local oak tree protection requirements), and with the management direction of the landowning agency. Additional mitigation may be required by CDFG for impacts to riparian trees. Tree removal shall not be permitted until a qualified forester, arborist, or restoration ecologist has reviewed the following procedures:

- Identification of proposed tree removal locations.

- A discussion demonstrating how maximum avoidance has been accomplished and why the trees proposed for removal cannot be avoided.
- Discussion of appropriate tree replacement ratios, as defined by the local jurisdiction, or, at a minimum, a 3:1 replacement to removed/impacted ratio for protected trees.
- Identification of suitable tree replacement locations within or immediately adjacent to the original tree impact area.
- Tree species and size specifications.
- Proposed understory native seed mix composition and application methods.
- Planting methodology, including spacing and proper timing of plant installation.
- Description of protective staking and caging measures.
- Description of irrigation and plant maintenance regime.
- Description of five-year monitoring effort to measure replacement success.
- Success criteria (including survival rates) and contingency measures in case of mitigation failure.
- Submission of an annual monitoring report to responsible agencies evaluating mitigation success.

Successful implementation of tree replacement shall be evaluated five years after installation of all trees (including any trees installed to replace dead trees during the five-year maintenance and monitoring period).. At that time, a report shall be submitted to the local jurisdiction, and CDFG, if requested, summarizing the results. A determination will be made by these agencies as to whether continued monitoring is required and/or whether implementation of additional tree support measures (e.g., replanting, fertilization, irrigation) is required.

B-3a **Restoration After Construction.** In areas where habitat had been disturbed prior to the project (disked areas and dirt roads), a readily available native grass seed mix shall be used. Restoration activities shall commence immediately after completion of construction, and shall be monitored for five years in accordance with Mitigation Measure B-1b. The Plan shall be submitted to the CPUC for review and approval at least 60 days before completion of construction.

B-5a **Protect Wildlife During Construction.** In order to reduce direct mortality impacts during construction, PG&E shall impose the following conditions on all construction personnel. These requirements shall also be explained in the WEAP (required in Mitigation Measure B-1i):

- Pre-construction surveys for ground-nesting avian species shall be conducted prior to construction in non-urban areas. If nests of ground-nesting species are identified within or near work areas that could be impacted by construction activities, measures to avoid or minimize impacts shall be developed during consultation with the resource agencies and implemented in the project area. These could include a work restriction in some areas during the breeding and fledging season (typically April 1 to August 31). If there are no feasible alternatives, the USFWS and CDFG shall be consulted and a permit obtained to relocate disturbed wildlife to a wildlife rehabilitation facility or other location specified by these agencies.

  Additional mitigation may include establishment of an avoidance buffer (the distance of the buffer shall be developed in consultation with the agencies and shall vary depending on species sensitivity, topography, tree cover, terrain, proximity to roads/highways, etc.); and

use of an on-site biological monitor to monitor for signs of disturbance. If the monitor determines that a disturbance is occurring, construction shall be halted, and the agencies shall be contacted as to the measures that shall be implemented.

- Vehicles operating within the ROW and on non-public dirt access roads shall not exceed a 15 mph speed limit, consistent with BAAQMD Control Measures for Construction Emissions of PM_{10} discussed in the Air Quality Section (Section D.10). Crew compliance will be monitored periodically.
- Litter or other debris that may attract animals shall be removed daily from the project area; organic waste shall be stored in enclosed receptacles, removed from the project site daily, and disposed of at a suitable waste facility
- No pets shall be allowed in the construction area, including access roads and staging areas
- Construction crews shall be educated regarding sensitive wildlife that could be encountered on highways and how to safely avoid them. Crew behavior shall be monitored by a qualified biologist approved by CPUC.

B-7a **Prepare Bird Collision Study or Install Flight Diverters.** At least 60 days prior to installation of conductors, PG&E shall either (a) perform a study to determine the potential for bird strikes in the areas identified below and then, depending on study results, install bird strike diverters, or (b) implement bird strike diverters as defined below. The study shall evaluate the actual bird strike incidents at existing transmission lines in the vicinity of the approved project corridor. If this study determines that bird strikes would not constitute a significant impact, PG&E shall document study results and submit a report to the CPUC for review and approval. Upon CPUC approval, compliance with the remainder of this measure would not be required. If PG&E opts not to complete this study or if study results confirm the potential benefits of bird flight diverters, the remainder of this measure shall be implemented. The protocol for this study (including the time period, survey intervals, and impact significance criteria) shall be approved by the CPUC, the U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Game (CDFG).

If PG&E does not perform the study defined above or if study results determine that flight diverters would likely be beneficial, PG&E shall install bird flight diverters on the 144-fiber optic ground wire in areas prescribed by the CPUC, the U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Game (CDFG).

B-8a **Protection for Special Status Wildlife Species.** The actions required below for protection of specific wildlife species shall be clearly defined by PG&E in a Special Status Wildlife Protection Plan provided to the CPUC for review and approval 60 days before the start of construction. If there are no feasible alternatives, the USFWS and CDFG shall be consulted and a permit obtained to relocate disturbed wildlife to a wildlife rehabilitation facility or other location specified by these agencies. The Plan shall define the specific areas in which each species is expected to occur, the results of completed surveys and schedule for completing all pre-construction surveys and seasonal surveys conducted prior to construction, and specific protective measures that will be taken during construction (including but not limited to those defined below). Where construction will occur within or near known or potential special status species or their habitat, the Applicant shall perform the following actions:

- **Edgewood Blind and Edgewood Park Microblind Harvestman.** The topsoil from the new footing locations will be salvaged and stockpiled, then used as backfill where, and if, the existing footings are removed (Mitigation Measure B-1c). The area will be revegetated with locally

collected, native grass species APM 6.5 (Erosion Control and Revegetation Plan), Mitigation Measure H-1a (Section D.7, Hydrology and Water Quality), and APM 9.1 (Implementation of Erosion Control and Sediment Transport Plan) all require preparation and implementation of a comprehensive Erosion Control Plan.

Towers that are in the sensitive serpentine grassland habitat at Edgewood County Park and Preserve will be accessed during construction only by helicopter or by foot from existing access roads, except in the event of an emergency. No new access roads will be constructed in these locations. In addition, construction activities shall be restricted during the rainy season and spring when these sensitive harvestman species are active (Mitigation Measure B-1c).

- **Bay Checkerspot Butterfly.** A USFWS-approved biologist will conduct larval surveys of flagged new tower construction footprints that contain the food plant, *Plantago erecta*. The timing of the surveys will coincide with the known activity of a nearby reference population (late February through mid-March). If larvae are observed within the construction footprint, PG&E shall consult with the USFWS to address potential impacts and mitigation measures for the Bay Checkerspot butterfly. During consultation, mitigation requirements may be further refined.

  If *Plantago* is not present, or if larvae are not observed within the construction footprint, then topsoil from the new footing locations shall be salvaged and stockpiled, then used as backfill where the existing footings are removed. The area shall be revegetated with locally collected, native grass species (Mitigation Measure H-1a, Section D.7, Hydrology and Water Quality). In order to minimize impacts from vehicular traffic, towers that are located in the sensitive serpentine grassland habitat at Edgewood County Park and Preserve shall be accessed during construction only by helicopter or by foot from existing access roads, except in the event of an emergency. In addition, construction activities shall be restricted or minimized from December 1 through June 30 during the larval feeding and adult flight season when the Bay Checkerspot butterfly is active.

  Some temporary disturbance of serpentine habitat (e.g., removal or trampling of vegetation) shall occur during construction, due to movement of workers and/or equipment during foundation excavation and pouring of concrete. Adverse effects to serpentine grasslands during construction shall be minimized to the greatest degree possible by prohibiting vehicular access and using helicopters to move workers and equipment. Following the completion of construction, affected serpentine habitat in Edgewood Park shall be restored, using local native grass species.

- **Mission Blue Butterfly, San Bruno Elfin Butterfly, Callippe Silverspot Butterfly.** Construction in the San Bruno Mountain Habitat Conservation Plan Area shall be limited to the existing paved roadway of Guadalupe Canyon Road. Indirect impacts, including fugitive dust emissions, could occur to potentially suitable habitat, but shall be mitigated with implementation of dust control measures (Air Quality) and erosion control measures presented in APMs 6.5 and 9.1 and Mitigation Measure H-1a (Section D.7, Hydrology and Water Quality). PG&E shall comply with the requirements of the San Bruno Mountain HCP for construction along Guadalupe Canyon Parkway.

- **Ricksecker's Water Scavenger Beetle.** No construction activity shall occur within the perennial stream that is crossed by the ROW and is considered habitat for this species. Temporary indirect impacts to this stream may occur as a result of erosion and sedimentation during construction-related activities, but shall be mitigated with implementation of erosion

control measures presented in Mitigation Measure H-1a (Section D.7, Hydrology and Water Quality).

- **California Tiger Salamander.** Pre-construction surveys shall be conducted, and shall include an investigation of potential burrow locations in the areas that are within dispersal distance of breeding areas, and that shall be disturbed by construction. Any individuals found shall be relocated by a qualified biologist to suitable habitat.

- **California Red-Legged Frog.** In all areas that potentially support California red-legged frog habitat (including areas listed in Table D.4-3), the Applicant shall perform pre-construction surveys to determine if this species is present at these and other locations that may support this species.

  If pre-construction surveys identify red-legged frogs within or adjacent to proposed construction activity within the ROW, then specific mitigation measures will be developed for each location by the wildlife biologist in consultation with the USFWS, based on site-specific conditions affecting the animals' safety. Mitigation measures may include the construction of temporary exclusion fencing around the construction area combined with regular monitoring. For the red-legged frog, mitigation activities would have to occur within the framework of the USFWS biological opinion (B-8b), a memorandum of understanding (between CDFG and USFWS), or other permit or instruction coming from USFWS or CDFG pursuant to federal or State endangered species legislation. Additionally, the Applicant shall ensure that a qualified biological monitor be present at construction areas near known or potential habitat, and that BMPs, as included in the SWPPP, shall be implemented during construction to minimize impacts associated with erosion in the proximity of any identified habitat.

- **San Francisco Garter Snake.** Mitigation for potential impacts to SFGS shall include:

  - No construction activities shall occur within suitable SFGS breeding sites or SFGS wetland habitats

  - Flagging of the designated work areas as required by Mitigation Measure B-1f; the presence of biological monitors; and worker environmental awareness training as required in Mitigation Measure B-1i

  - Consultation with the USFWS and CDFG shall be initiated by PG&E to define specific mitigation for potential impacts to SFGS, which may include:

    - Seasonal restrictions on tower construction
    - Tower construction (foundation construction and tower replacement activities) between Towers 12/79 and 14/95 shall be done between August 1 and November 1.
    - If work must be done outside this timeframe, additional mitigation measures could include temporary exclusion fencing and/or biological monitoring as approved by USFWS.
    - Project activities in potential dispersal and overwintering habitat shall be avoided and/or minimized to the greatest degree possible.
    - Additional trapping and visual surveys shall be conducted at the following locations during the Spring 2004 activity period (March through May) to determine the type and extent of specific protective measures needed.

- **Western Pond Turtle.** Where construction is to occur near known or potential habitat for western pond turtle (i.e., water crossing and near ponds), pre-construction surveys shall be conducted to determine the presence or absence of this species. If pond turtles are observed, a determination shall be made in consultation with USFWS and CDFG as to

whether or not construction shall adversely impact this species and what measures shall be implemented. Potential impacts to this species shall be minimized through implementation of pre-construction surveys by a qualified biologist who is approved by the resources agencies in identifying and relocating this species. In order to minimize impacts to the aquatic environment (supplements APM Bio-14), mitigation shall also include implementation of erosion and sedimentation control through the required preparation and implementation of a comprehensive Erosion Control Plan ([APM 6.5 (Erosion Control and Revegetation Plan), Mitigation Measure H-1a (Section D.7, Hydrology and Water Quality), and APM 9.1 (Implementation of Erosion Control and Sediment Transport Plan)]. require preparation and implementation of a comprehensive Erosion Control Plan) to minimize impacts to the aquatic environment (supplements APM Bio-14).

- **Nesting Songbirds** (Olive-Sided Flycatcher, California Yellow Warbler, Pacific-Slope Flycatcher, San Francisco Common Yellowthroat, Purple Martin, Allen's Hummingbird). Disruption of potentially nesting avian species could occur as a result of increased human activity in the ROW (e.g., due to the use of heavy equipment and human traffic) during the breeding season (typically April 1 to August 31). Pre-construction surveys for nesting avian species shall be conducted prior to construction in non-urban areas. If nesting species are identified within or near work areas that could be impacted by construction activities, measures to avoid or minimize impacts shall be developed during consultation with the resource agencies and implemented in the project area. These could include a work restriction in some areas during the breeding and fledging season (typically April 1 to August 31).

  Additional mitigation may include establishment of an avoidance buffer (the distance of the buffer shall be developed in consultation with the agencies and shall vary depending on species sensitivity, topography, tree cover, terrain, proximity to roads/highways, etc.); and use of an on-site biological monitor to monitor for signs of disturbance. If the monitor determines that a disturbance is occurring, construction shall be halted, and the agencies shall be contacted as to the measures that shall be implemented.

- **Raptor Species.** PG&E shall avoid disturbance to active raptor nests at all locations. Pre-construction surveys shall be performed in all non-urban areas to identify potential raptor nesting sites within or near the ROW.

  No pre-construction surveys shall be required if construction activities are to occur only during the non-breeding season (September 1 through January 31). If, however, construction activities are scheduled to occur during the breeding season (February 1 through August 31), pre-construction surveys of all potentially active nest sites within 500 feet of the construction corridor shall be conducted in areas that may potentially have nesting raptors, including ground nesting raptor species such as northern harrier and short-eared owl. If surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation shall be required.

  If active nests are found, a no-disturbance buffer shall be established around the active nest(s). The size of individual buffers can be adjusted, following a site evaluation by a qualified raptor biologist, which shall depend upon the presence of topographical features that obstruct the line of site from the construction activities to the nest or observations of the nesting pair during construction based on the level of ongoing disturbance (e.g., farming activities or road traffic) and the observed sensitivity of the birds. Site evaluations and buffer adjustments shall be made in consultation with the local CDFG representative. The portion of the project that is within the designated buffer shall be identified in the field by staking and flagging (B-7a).

If these measures are not feasible, PG&E shall discuss alternatives with resource agencies. If alternative measures are approved, the project will proceed as modified. (Supplements APM Bio-16).

- **Tree-Roosting Bats.** Prior to construction, all potential roost trees that must be removed shall be surveyed and identified in the field. The findings of these surveys shall be presented to the SFPUC, USFWS and CDFG to determine if further bat surveys are required. Reasonable evidence of consultation, agencies' decisions, and subsequent implementation (if additional surveys are deemed necessary) shall be presented to the CPUC. Correspondence with the agencies could result in further protective measures. This measure supersedes APM Bio-18.
- **San Francisco Dusky-Footed Woodrat**. Requirements of APM Bio-19 shall be implemented. If stick nests cannot be avoided, PG&E shall consult with the CDFG to determine appropriate mitigation, such as relocation of the woodrats. Evidence and/or documentation of consultation, decisions, and implementation shall be presented to the CPUC.

B-8b **Consultation with Resource Agencies.** If, after applying Mitigation Measures B-1a through B-8a, the CPUC-approved Project Biologist determines that all impacts on special status plant and wildlife species cannot be avoided, PG&E shall initiate FESA Section 7 Consultation with the U.S. Fish & Wildlife Service for federally listed species and/or CESA 2080 Consultation will be initiated with the California Department of Fish and Game for State-listed species. These consultations shall determine requirements for obtaining a (FWS) Biological Opinion and/or (CDFG) Incidental Take Permit. PG&E shall obtain any such required Biological Opinion or Incidental Take Permit and, in that process, shall work cooperatively with the appropriate agency or agencies to develop appropriate mitigation measures to offset impacts to the affected species. PG&E shall thereafter implement all mitigation recommendations of the FWS and/or CDFG that result from these consultations and shall provide evidence of implementation to the CPUC. In addition, if the approved project involves construction within Edgewood County Park and Preserve or San Bruno Mountain, PG&E shall recommend to the USFWS that the County of San Mateo be involved in consultation for these areas.

B-8c **Crystal Springs Dam CRLF Protection**. The following measures shall be followed to minimize impacts to CRLF during project-related work on the top or on the face of Crystal Springs Dam:

- Construction affecting the top of the dam shall occur only between November 15 and January 15.
- Before initiating any work affecting the top of the dam, a qualified biologist will carefully search the pond and substrate to verify that no CRLF are present.
- A pathway into the pond area should be established which will not disturb the plant community on the canyon wall immediately adjacent to the south end of the pond, since this is the only CRLF entrance and exit route.
- A solid four-foot high plywood exclusion fence with the bottom buried six inches below grade shall be attached to the outside of the chain link fence at the south end of the pond. This will prevent any CRLFs that may be wandering through the adjacent hillside early in the rain season from entering the pond.
- A qualified biological monitor shall inspect the work site daily to see that all protective procedures are being followed and answer any questions that may arise.
- The pond shall then be dewatered and all aquatic plants and substrate material removed from the workspace and stored in tubs. A sand bag wall shall be constructed along the edge of the workspace in order to keep mud and remaining water from seeping into the construction area.

- Upon completion of all work, the sand bag barrier between the pond and the work area shall be removed, soil replaced if applicable, and all plants replanted in a pattern as directed by the principal biological monitor. The pond shall then be refilled with screened lake water and the plywood barriers removed.
- The pond shall be monitored weekly for the appearance of adult frogs and eventually egg masses. These two events will represent the success criteria for the project in this area.
- Since the CRLF is a federally listed species, consultation with the USFWS shall be completed to refine or add to the measures listed above.

B-9a **Habitat Loss from Underwater Cable Installation.** PG&E shall perform detailed surveys at areas proposed to be trenched for cable access to Lower Crystal Springs Reservoir and shall submit survey results to the CPUC for review and approval. If these surveys show potential effects on sensitive species or habitats as determined by the CPUC-designated biologist, PG&E shall use directional drilling techniques to install the cable, avoiding all impacts to the shoreline.

Cultural Resources

C-1a **Avoid Environmentally Sensitive Areas.** Known prehistoric and historic archaeological sites located within, or just outside of the project APE shall be designated as an Environmentally Sensitive Area (ESA). Construction personnel and equipment shall be instructed on how to avoid ESAs. Existing historic structures located within the project APE along underground portions of the transmission line route shall be avoided by confining all construction activities between street curb lines within 100 feet of either side of a designated historic property. In locations where construction within 100 feet of a resource cannot be confined to between the curblines, PG&E shall consult with a qualified architectural historian to assess the potential for impacts associated with alterations of the historic setting or landscape of a property. If a determination is made that construction will have a negative impact on the historic setting of a structure PG&E shall work with the consulting architectural historian to restore the original setting or landscape of the property. Upon discovery of potential buried cultural resources, work in the immediate area of the find shall be halted and PG&E's archaeologist as well as the CPUC Environmental Monitor notified immediately.

C-1b **Cultural Resources Treatment Plan (CRTP).** PG&E shall develop a Cultural Resources Treatment Plan (CRTP) for Archaeological High-Probability Areas identified in subsections D.5.3.3 through D.5.6, including procedures for protection and avoidance of Environmentally Sensitive Areas (ESAs), and Archaeological High-Probability Areas, evaluation and treatment of the unexpected discovery of cultural resources including Native American burials; detailed reporting requirements by the Project Archaeologist; curation of any cultural materials collected during the Project; and requirements to specify that archaeologists and other discipline specialists meet the Professional Qualifications Standards mandated by the California Office of Historic Preservation (OHP).

Current project design ensures that known and recorded cultural resources will be avoided during construction, and operation and maintenance. Specific protective measures shall be defined in the CRTP to reduce the potential adverse impacts on any presently undetected cultural resources to less than significant levels. The CRTP shall be submitted to the CPUC for review and approval at least 30 days before the start of construction.

The CRTP shall define construction procedures for areas near known/recorded cultural sites. Wherever a tower, access road, equipment, etc., must be placed or accessed within 100 feet of a recorded, reported, or known archaeological site eligible or potentially eligible for the CRHR, the site will be flagged on the ground as an ESA (without disclosure of the exact nature of the environmental sensitivity [i.e., the ESA is *not* identified as an archaeological site]). Construction equipment shall then be directed away from the ESA, and construction personnel shall be directed not to enter the ESA. Archaeological monitoring of project construction will be focused in the immediate vicinity of the designated ESAs. (Supersedes APM 7.1)

C-1c **Construction Monitoring**. Archaeological monitoring shall be conducted by a qualified archaeologist familiar with the types of historic and prehistoric resources that could be encountered along the transmission line corridor. Monitoring shall occur in all locations specified in the mitigation monitoring table, or at the discretion of the principal archaeologist. The qualifications of the principal archaeologist shall be approved by the CPUC. Monitored locations shall include designated Archaeological High-Probability Areas at watercourse crossings, in areas near the former bay shore, and near known resources. Monitored locations shall also include designated ESAs, described as locations in the immediate vicinity of a known resource. Intermittent monitoring may occur in areas of moderate archaeological sensitivity at the dis-

cretion of the principal archaeologist. A Native American monitor is required at all culturally sensitive locations specified in the mitigation monitoring table, or at the discretion of the principal archaeologist. (Supplements APM 7.3)

C-3a **Evaluation of Historic Bridge.** Prior to project construction, PG&E shall conduct test bores above the western bridge section to determine whether it will be possible to install the underground transmission line as planned without damaging the historic bridge. If PG&E finds insufficient fill above the bridge to successfully trench without causing damage to the bridge or bridge setting, PG&E shall consider other methods of crossing the unnamed stream channel, such as directional drilling of the watercourse. A report shall be submitted to the CPUC for review and approval at least 60 days before construction starts, documenting test boring results and providing a diagram of the proposed construction techniques.

C-4a **Minimize Visible Change to Crystal Springs Dam.** If the "top of the dam" crossing is approved by the CPUC, PG&E shall cross Crystal Springs Dam by trenching (e.g., cutting a trench with concrete saws) through the top of Crystal Springs Dam. The trench shall be backfilled with concrete flush with the existing dam contours. The concrete surface flush with the existing dam contours shall be cosmetically textured/finished and color-tinted/toned to blend in with the original (old) concrete to mimic its weathered appearance (and is not visually intrusive).

Geology, Soils, and Paleontology

G-1a **Perform Geotechnical Studies**. The Applicant shall perform design-level geotechnical studies to identify areas of soft or loose soils along the alignment where they may affect tower footing excavation stability and/or access roads. Where soft or loose soils are found, Best Management Practices (BMPs) shall be followed for avoidance, improvement, or replacement of affected soil areas. BMPs shall be identified and provided to the CPUC and SFPUC for review and approval at least 60 days before construction.

G-2a **Protect Against Slope Instability.** Appropriate support and protection measures shall be implemented to maintain the stability of excavations and protect surrounding structures and utilities to limit ground deformation. Design-level geotechnical investigations shall be performed to evaluate subsurface conditions, identify potential hazards, and provide information for development of excavation plans and procedures. Appropriate construction methods and procedures, in accordance with State and federal health and safety codes, shall be followed to protect the safety of workers and the public during trenching and excavation operations. PG&E shall document compliance with this measure prior to the start of construction by submitting a report to the CPUC for review and approval. The report shall document the investigations and detail the specific support and protection measures that will be implemented.

G-3a **Consult a Paleontologist**. Prior to construction, a qualified paleontologist shall be consulted regarding the likelihood of encountering significant fossils along specific segments of the approved alignment. The definition of a "qualified paleontologist" is provided by the Society of Vertebrate Paleontologists (SVP, 1999). If the paleontologist determines fossils may be present, a paleontologic monitor shall be present at each excavation that penetrates undisturbed native soil or rock (not fill or Franciscan rock) that has been identified by the paleontologist as moderately to highly sensitive. Sampling and collecting shall follow SVP (1999) guidelines. Typical samples for microfossils shall be collected and any significant megafossils that are found shall be prepared for curation by the paleontologist and donated to a public museum such as the Museum of Paleontology at the University of California at Berkeley. PG&E shall document compliance with this measure prior to the start of construction by submitting to the CPUC for review and approval a preliminary paleontological report by the paleontologist containing the following elements: (1) the locations where project construction is likely to encounter significant fossils; and (2) a plan outlining the proposed monitoring and fossil recovery/salvage methods. Within ninety (90) days of completion of the excavation phase of the project, the paleontologist shall prepare a final paleontological report summarizing the monitoring and the findings; this report shall be provided to the CPUC for review and approval. The report shall include a list of fossils found (if any), the general locations of found fossils (precise locations should be kept confidential), the name of the curating institute where the fossils have been delivered, and a statement that the loss of non-renewable resources has been mitigated.

G-5a **Reduce Effects of Groundshaking.** The Applicant shall perform design-level geotechnical investigations including site-specific seismic analyses to evaluate the peak ground accelerations for design of project components. The Applicant shall follow the Institute of Electrical and Electronics Engineers (IEEE) 693 "Recommended Practices for Seismic Design of Substations" which has specific requirements to mitigate the types of damage that 230 kV equipment at substations have been subjected to in the past. These design guidelines shall be implemented during construction of substation modifications and transition station construction. Substation and transition station control buildings shall be designed in accordance with the Uniform Building Code for sites in

Seismic Zone 4 with near-field factors. Compliance with this measure shall be documented to the CPUC at least 60 days before construction by submittal of reports describing the potential peak ground accelerations expected for design level earthquake and a description of how the design will accommodate this anticipated motion.

G-6a **Geotechnical Investigations for Liquefaction and Slope Instability**. Since seismically induced ground failure has the potential to damage or destroy project components, the Applicant shall perform design-level geotechnical investigations to assess the potential for liquefaction, lateral spreading, seismic slope instability, and ground-cracking hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures shall be incorporated into the project designs. Appropriate measures could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in underground cables to allow ground deformations without damage to structures. PG&E shall submit a report of the required investigations to the CPUC for review and approval at least 60 days before construction.

G-7a **Geotechnical Surveys for Landslides.** The Applicant shall perform design-level geotechnical surveys to evaluate the potential for unstable slopes, landslides, earth flows, and debris flows along the approved transmission line route and in the vicinity of other project facilities. Based on these surveys, approved project facilities shall be located away from very steep hillsides, debris-flow source areas, the mouths of steep sidehill drainages, and the mouths of canyons that drain steep terrain. A report documenting these surveys shall be submitted to the CPUC for review and approval at least 60 days before construction.

G-8a **Minimize Project Structures Within Active Fault Zone.** Any crossing of an active fault (overhead or underground) shall be made as close to perpendicular to the fault as possible to make the segment cross the shortest distance within an active fault zone. For crossings of active faults with overhead transmission lines, the towers shall be placed as far as feasible outside the area of mapped fault traces.

For underground crossings of active or potentially active fault traces, the cable vaults on either side of the San Andreas Fault shall be oversized, leaving as much slack as possible in the cables (ideally enough slack to allow for 20 feet of offset). If 20 feet of offset cannot be accommodated, the underground cable should be installed in the shortest feasible segments, with splice vaults located as close as possible outside of the fault zone in order to minimize the area where post-earthquake repairs may be required. Adequate supplies of spare cable sections shall be maintained by PG&E for rapid repair after an earthquake-caused failure. Vault and conduit design for an underground crossing of the Serra Fault should be based on fault parameters and expected displacement as determined from new analysis and approved by the CPUC prior to construction.

For aboveground installations such as transition stations, PG&E shall follow standard design codes for facilities in seismic zones. Compliance with this measure shall be documented to the CPUC in a report submitted for review and approval at least 60 days prior to the start of construction.

G-9a **Implement Standard Engineering Methods for Problematic Soils**. The Applicant shall perform design-level geotechnical studies to identify areas with potentially problematic soils and develop appropriate design features, including excavation of potentially problematic soils during construction and replacement with engineered backfill, ground-treatment processes, redirection of

surface water and drainage away from expansive foundation soils. Study results and proposed solutions shall be provided to the CPUC for review and approval at least 60 days before construction.

G-11a Implement Standard Engineering Methods for Corrosive Soils. The Applicant shall perform design-level geotechnical studies to identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures for protection of reinforcement, concrete, and metal-structural components against corrosion shall be utilized, such as use of corrosion-resistant materials and coatings, increased thickness of project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems. Study results and proposed solutions shall be provided to the CPUC for review and approval at least 60 days before construction.

Hydrology and Water Quality

H-1a **Erosion and Sedimentation Control.** The Erosion Control and Sediment Transport Plan, Storm-water Pollution Prevention Plan, and Revegetation Plan required by APM 9.1 shall be reviewed and approved by the San Francisco Public Utilities Commission for those portions of the project within the Peninsula Watershed, for compliance with the Peninsula Watershed Plan prior to initiation of construction. Verification of SFPUC approval shall be provided to the CPUC at least 60 days before construction.

H-2a **Hazardous Substance Control.** The environmental training and monitoring program and hazardous substance control and emergency response plan required by APMs 9.2 and 9.3 shall be reviewed and approved by the San Francisco Public Utilities Commission for those portions of the project within the Peninsula Watershed prior to initiation of construction. Verification of SFPUC approval shall be provided to the CPUC at least 60 days prior to construction.

Care shall be exercised to minimize, contain and properly dispose of paint flakes generated during removal and dismantling of equipment or tubular steel poles coated with lead-based paint. Poles shall be dismantled on paved surfaces or protective sheeting on soil areas to facilitate collection of the paint flakes.

H-4a **Flood Damage Prevention**. Aboveground project features such as power poles, substations, and transfer stations shall be placed outside the flow path of watercourses unless an engineering analysis, reviewed and approved by the California Public Utilities Commission and San Francisco Public Utilities Commission (for areas within the Peninsula Watershed), demonstrates that watercourse avoidance is not practicable, and that appropriate measures, such as installation of bank protection or raising foundations above flood levels, have been taken to identify and prevent potential flooding and erosion hazards. PG&E shall document to the CPUC at least 60 days before the start of construction which structures, if any, would be in flow paths and what protective measures are proposed.

H-7a **Operational Oil Releases.** PG&E shall submit the Spill Prevention, Countermeasure, and Control Plan described in APM 9.6 (Spill Prevention) to the CPUC for review and approval, and to the San Francisco Public Utilities Commission for substations, switchyards, and taps located within the Peninsula Watershed. PG&E shall document to the CPUC the SFPUC's approval of SPPCP at least 60 days before construction.

H-8a **Scour and Erosion.** At locations where the proposed underground transmission line would cross below or pass adjacent to streams with erodible beds or banks, the burial depth shall be extended below the estimated 100-year depth of scour for that stream, or located at a sufficient distance from the bank as to avoid erosion that can reasonably be expected to occur during the life of the project. Proposed burial depths shall be submitted to the CPUC for review and approval at least 60 days before construction.

H-9a **Construction Effects on Groundwater.** A groundwater evaluation shall be conducted before construction to determine areas where, based on well logs and other available groundwater information, the groundwater depth is likely to be less than 8 feet below the ground surface at the time of construction. At appropriate locations, as determined by the results of the groundwater evaluation and consultation with the CPUC, groundwater levels shall be measured prior to construction by drilling pilot borings. PG&E shall document results of the groundwater evaluation in a letter report to the CPUC at least 30 days before construction starts and

shall propose specific means to minimize the impact on groundwater if shallow groundwater is found that does not flow parallel to the orientation of the underground line, such as creating a shallower trench or creating the duct bank in the shallow groundwater area that is somewhat porous and would allow groundwater to flow through the bank to some degree. These measures must be approved by the CPUC prior to the start of construction of the underground segment.

H-10a Contamination From Motorized Watercraft. Should the Underwater Cable Design Option be selected as part of the PG&E Route Option 1B – Underground Alternative, PG&E shall submit to the CPUC and the SFPUC for review and approval a plan for prevention of reservoir contamination, including the following provisions at a minimum:

- Motorized watercraft shall be steam-cleaned prior to entering the reservoir;
- Oil-absorbent booms will be onboard all watercraft at all times;
- Refueling of watercraft will occur out of the reservoir on dry land; and
- All watercraft with outboard engines would utilize four-stroke engines meeting the California Air Resources Board new emission standards for outboard engines manufactured after 2001.

H-10b Protect Water Quality from Lakeshore Operations. If the Underwater Cable is selected for use in the approved project, PG&E shall install coffer dams around the entrance and exit areas of the lakeshore to minimize sedimentation and drilling muds that might otherwise enter the reservoir.

Public Health and Safety

HAZ-2a **Conduct Phase II Investigation**. A Phase II investigation shall be conducted for the project prior to commencement of construction activities. The investigation shall include a review of current status from agency files of listed contaminated sites presented in the summary tables for each alignment or substation. This review shall include the concentration and limits of contamination, type of release, and media affected. In addition, the regulatory agency requirements to penetrate and restore soil caps at contaminated sites or landfill covers should be ascertained. The Phase II investigation shall include collection of samples for laboratory analysis and quantification of contaminant levels within the proposed excavation and surface disturbance areas of the project prior to the start of construction. The scope of the field investigation shall be developed based on the agency file review of each listed contamination site and shall be in accordance with the standard of practice for assessment of appropriate worker protection and material handling and disposal procedures. Soil sampling and laboratory testing shall be conducted at locations along the project route, transition station site, and at substations where known contaminated sites are within 0.25 miles of the alignment or are determined to pose a threat to the project based on the results of agency file review. Subsurface investigation shall determine appropriate worker protection and hazardous material handling and disposal procedures appropriate for the subject area. Areas with contaminated soil and/or groundwater determined to be hazardous waste shall be removed by personnel who have been trained through the OSHA recommended 40-hour safety program (29CFR1910.120) with an approved plan for groundwater extractions, soil excavation, control of contaminant releases to the air, and off-site transport or on-site treatment. Results of the agency file review and Phase II investigations shall be reviewed and approved by the San Mateo County's Environmental Health Division and/or DTSC prior to construction. A copy of the DTSC or County Environmental Health Division approval letter must be provided to the CPUC prior to start of construction.

HAZ-3a **Conduct Construction Soil and Groundwater Sampling and Testing.** The procedures described in APM 11.4 (soil sampling and characterization) shall be followed. In addition, the CPUC, SFPUC (for areas within the Peninsula Watershed), and the RWQCB shall be provided with all pre-construction soil and groundwater sampling and testing information prior to initiation of construction. In the event contaminated groundwater or soils are encountered, these same agencies shall be provided with the proposed extraction and disposal plans for approval prior to further construction in those areas. To reduce agency review time, the framework of these extraction and disposal plans could be presented in a contingency plan submitted to each agency prior to construction.

HAZ-3b **Observe Exposed Soil.** During trenching, grading, or excavation work for the project, the contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, the contractor shall stop work until the material is properly characterized and appropriate measures are taken to protect human health and the environment. The contractor shall comply with all local, State, and federal requirements for sampling and testing, and subsequent removal, transport, and disposal of hazardous materials. In the event that evidence of contamination is observed, the contractor shall document the exact location of the contamination and shall immediately notify the CPUC's Environmental Monitor, describing proposed actions. A weekly report listing encounters with contaminated soils and describing actions taken shall be submitted to the CPUC.

HAZ-4a **Documentation of Compliance.** PG&E shall implement APMs 11.1 and 11.8 at the transition station and at substations, and shall document compliance by (a) submitting to the CPUC for review and approval an outline of the proposed Environmental Training and Monitoring Program, (b) providing a list of names of all operations personnel who have completed the training program, and (c) providing a copy of the Spill Prevention, Control, and Countermeasures Plan to the CPUC for review and approval at least 60 days before the start of operation.

PS-1a As part of the design and construction process for the Proposed Project, the Applicant shall limit the conductor surface electric gradient in accordance with the IEEE Radio Noise Design Guide.

PS-1b After energizing the transmission line, PG&E shall respond to and document all radio/television/equipment interference complaints received and the responsive action taken. These records shall be made available to the CPUC for review upon request. All unresolved disputes shall be referred by PG&E to the CPUC for resolution.

PS-2a As part of the siting and construction process for the Proposed Project, PG&E shall identify objects (such as fences, conductors, and pipelines) that have the potential for induced voltages and work with the affected parties to determine proper grounding procedures (CPUC G095 and the NESC do not have specific requirements for grounding). PG&E shall install all necessary grounding measures prior to energizing the line. Thirty days prior to energizing the line, PG&E shall notify in writing, subject to the review and approval of the CPUC, all property owners within and adjacent to the Proposed Project ROW of the date the line is to be energized. The written notice shall provide a contact person and telephone number for answering questions regarding the line and guidelines on what activities should be limited or restricted within the ROW. PG&E shall respond to and document all complaints received and the responsive action taken. These records shall be made available to the CPUC for review upon request. All unresolved disputes shall be deferred by PG&E to the CPUC for resolution.

The written notice shall describe the nature and operation of the line, and the Applicant's responsibilities with respect to grounding all conducting objects. In addition, the notice shall describe the property owner's responsibilities with respect to notification for any new objects, which may require grounding and guidelines for maintaining the safety of the ROW.

Recreation

R-2a **Avoidance of Peak Use Periods and On-Site Notification.** PG&E shall not schedule construction during peak use periods, (i.e., weekends and holidays) for recreational facilities listed below. In addition, PG&E shall provide onsite notification of recreational access closures at least two weeks in advance, through the posting of signs and/or notices at all public entrances. Documentation of such notification should be submitted to CPUC.

- Edgewood County Park and Preserve
- Peninsula Watershed Lands
- Golden Gate National Recreation Area Easements
- Pulgas Ridge Open Space Preserve
- Pulgas Water Temple
- Sheep Camp Trail
- Ralston Trail
- San Mateo Creek Trail
- Crystal Springs Trail and Bikeway
- Skyline Frontage Bikeway
- Crystal Springs Golf Course
- Sawyer Camp Trail and Access Point
- San Andreas Trail and Access Point
- Bayshore Circle Park
- Orange Memorial Park
- Spruce Avenue Bikeway
- Orange Street Bikeway
- Herman Tot Lot
- Chestnut Avenue Bikeway
- Cypress Hills Golf Course
- Hillside Boulevard Bikeway
- Guadalupe Canyon Parkway Bike Lane
- San Bruno Mountain State and County Park
- Carter Street Bikeway
- Bayshore Boulevard Bikeway

R-2b **Construction Plan for San Bruno Mountain State and County Park.** Prior to construction in San Bruno Mountain State and County Park, PG&E shall submit to the CPUC written documentation of coordination with the Park Habitat Manager and Plan Operator for the Habitat Conservation Plan (HCP). PG&E shall provide evidence of compliance with the Transmission and Gas Lines Operating Program of the HCP, including, but not necessarily limited to, the following actions:

- No construction activities, including equipment storage or staging, shall occur outside of the Guadalupe Canyon Parkway ROW. Staging areas shall be located outside of the Park boundaries.
- PG&E shall comply with all of the regulatory provisions of the HCP.
- PG&E shall notify the Plan Operator of proposed construction activities and provide the Habitat Manager with detailed drawings of the areas where activities will take place.
- PG&E shall consider incorporation of changes suggested by the Plan Operator into the Proposed Project, providing all such suggested changes to the CPUC for review at least 60 days before construction, along with PG&E's recommended course of action on each item. In the event that a dispute arises between PG&E and the Plan Operator, the CPUC will resolve the dispute.

Air Quality

A-1a **Control Dust Emissions.** APMs 14.1 and 14.2 shall be implemented at all construction sites. PG&E shall identify all areas of the approved route that are within 300 feet of residences, schools, convalescent facilities, and hospitals in a report submitted to the CPUC at least 60 days before construction. The following BAAQMD PM_{10} control measures shall be implemented at construction sites within these areas:

- Install wind breakers, or plant trees/vegetative wind breaks at windward side(s) of construction staging or parking areas if activity at the staging or parking area causes persistent visible emissions of fugitive dust beyond the work area.
- Suspend excavation, trenching, and grading activity if winds exceed 25 mph and the activity causes persistent visible emissions of fugitive dust beyond the work area.
- Limit the area subject to excavation, grading and other construction activity at any one time.

A-2a **Control Exhaust Emissions.** The following measures shall be implemented during construction (supersedes APM 14.3):

- Construction workers shall carpool when possible.
- Vehicle idling time shall be minimized (i.e., 5-minute maximum).
- Alternatively fueled construction equipment shall be used where feasible.
- Equipment shall be properly tuned and maintained.

PG&E shall document compliance with this measure by submitting an exhaust emission reduction plan to the CPUC for review and approval at least 60 days before the start of construction. The plan shall document the approach for ensuring carpooling, use of alternatively fueled vehicles, and shall define how and where records of equipment tuning and maintenance will be kept for CPUC review during construction. PG&E shall ensure that all construction workers are aware of the vehicle idling restriction by including explanation of this requirement in the Worker Training Program.

A-3a **Asbestos Dust Mitigation Plan.** An Asbestos Dust Mitigation Plan shall be prepared by PG&E, or its contractor, and submitted to and approved by the Bay Area Air Quality Management District before the start of any construction or grading activity. A copy of the approved plan shall be submitted to the CPUC for documentation. The plan shall be prepared and implemented according to the requirements of 17 Cal. Code Regs. 93105 (CARB Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations).

Noise

N-1a PG&E shall minimize construction noise within the City of Burlingame with the following techniques:

- All construction activity occurring within Burlingame's city limits shall not commence earlier than 7:00 a.m. and conclude no later than 7:00 p.m., Monday through Friday unless otherwise approved by the City. On Saturdays such construction activity shall not commence earlier than 8:00 a.m. and conclude no later than 6:00 p.m. No construction activities shall occur on Sundays or legal holidays. These time limitations shall be adhered to at all times, except in the case of urgent necessity in the interest of public health and safety.
- PG&E shall demonstrate within Burlingame's city limits: (i) No individual piece of equipment shall produce a noise level exceeding 85 dBA at a distance of 25 feet, unless granted specific permission from the City of Burlingame City Engineer.
- PG&E shall not use pile drivers for any purposes for construction within Burlingame's city limits, unless granted specific permission from the City of Burlingame City Engineer.

Transportation and Traffic

T-1a **Prepare Transportation Management Plans.** Prior to the start of construction, PG&E shall submit Traffic Management Plans (TMPs) to all agencies with jurisdiction of public roads that would be affected by overhead and underground construction activities as part of the required traffic encroachment permits. TMPs shall define the locations of all roads that would need to be temporarily closed due to construction activities, including aerial hauling by helicopter, hauling of oversized loads by truck, and due to conductor stringing activities. Input and approval from the responsible public agencies shall be obtained; copies of approval letters from each jurisdiction must be provided to the CPUC prior to the start of construction within that jurisdiction. The TMPs shall define the use of flag persons, warning signs, lights, barricades, cones, etc. according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the *Work Area Traffic Control Handbook* (WATCH). Documentation of the approval of these plans and issuance of encroachment permits shall be provided to the CPUC prior to the start of construction activities that require temporary closure of a public roadway. (Supersedes APM 13.3)

T-1b **Restrict Lane Closures.** PG&E shall restrict all necessary lane closures or obstructions on major roadways associated with overhead or underground construction activities to off-peak periods in urbanized areas to mitigate traffic congestion and delays. Lane closures in urbanized areas must not occur between 6:00 and 9:30 a.m. and between 3:30 and 6:30 p.m., or as directed in writing by the affected public agency in the encroachment permit. PG&E shall implement bored crossings or nighttime construction if the appropriate jurisdiction determines that trenched and/or daytime roadway crossings would be too disruptive to local traffic patterns.

T-3a **Repair Damaged Road ROWs.** If damage to roads, sidewalks, and/or medians (including irrigation systems for landscaped medians) occurs, PG&E will coordinate repairs with the affected public agencies to ensure that any impacts are adequately repaired. Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. Said measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.

T-6a **Ensure Emergency Response Access.** PG&E shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. Police departments, fire departments, ambulance services, and paramedic services shall be notified in advance by PG&E of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. At locations where access to nearby property is blocked, provision shall be ready at all times to accommodate emergency vehicles, such as plating over excavations, short detours, and alternate routes in conjunction with local agencies. Traffic Control Plans (T-1a) shall include details regarding emergency services coordination and procedures, and copies shall be provided to all relevant service providers. Documentation of coordination with service providers shall be provided to the CPUC prior to the start of construction.

T-9a **Grade Separation Avoidance.** If a route is selected that requires construction on San Bruno Avenue east of El Camino Real, PG&E shall coordinate project design with the Peninsula Corridor Joint Powers Board to ensure that the transmission line is appropriately placed to avoid conflict with

both the BART tunnel and the planned grade separation project at San Bruno Avenue and Huntington Avenue. If specific design measures cannot successfully avoid conflicts with the City of San Bruno's San Bruno Avenue Grade Separation Conceptual Plan project, the Proposed Project shall be routed so the underground route shall turn north on El Camino Real from San Bruno Avenue, proceed north to Sneath Lane, turn northeast in Sneath Lane through Huntington Avenue to the BART ROW, where the line would rejoin the proposed route. This reroute shall also be implemented if PG&E Route Option 1B is selected.

If the Modified Underground 230 kV Alternative is selected for use with either the proposed route along San Bruno Avenue or PG&E Route Option 1B, and design coordination described above for use of San Bruno Avenue is not successful, the grade separation project shall be avoided by the same reroute, except that the underground route shall continue east past the end of Sneath Lane, under the railroad tracks, into Tanforan Drive and to Shaw Drive, where this reroute would join the Modified Underground 230 kV Alternative as originally defined.

T-9b **Crystal Springs Dam Bridge.** If Route Option 1B is approved and the method of crossing the Crystal Springs Dam area would affect the bridge over the dam, PG&E shall coordinate the timing of its transmission line project with San Mateo County so the transmission line project can avoid conflict with, or be incorporated into, the County's bridge replacement project plans. PG&E shall reimburse the County for all cost that the County occurs associated with incorporating the transmission line project with the bridge replacement project.

Public Services and Utilities

U-1a **Notification of Utility Service Interruption.** Prior to construction in which a utility service interruption is known to be unavoidable, the Applicant shall notify members of the public affected by the planned outage by mail of the impending interruption, and shall post flyers informing the public of the service interruption in neighborhoods affected by the planned outage. Copies of notices and dates of public notification shall be provided to the CPUC.

U-1b **Protection of Underground Utilities.** Prior to construction of the underground transmission line, the Applicant shall submit to the CPUC written documentation, including evidence of review by the appropriate jurisdictions, including the following:

- Construction plans designed to protect existing utilities and showing the dimensions and location of the finalized alignment;
- Records that the Applicant provided the plans to affected jurisdiction for review, revision and final approval;
- Evidence that the project meets all necessary local requirements;
- Evidence of compliance with design standards;
- Copies of any necessary permits, agreements, or conditions of approval;
- Records of any discretionary decisions made by the appropriate agencies.

U-1c **Protect Utilities Against Corrosion.** PG&E shall evaluate the potential for the underground transmission line to increase corrosion on existing pipelines. If this potential is determined to exist, PG&E shall be responsible for installation of the required cathodic protection systems that would eliminate this risk. A letter documenting these consultations and their results, including concurrence by the affected jurisdiction(s) and other companies, shall be provided to the CPUC prior to the start of construction.

(END OF APPENDIX B)